Open and distance learning (ODL) as a strategic tool for improving employability and entrepreneurship in new frontier markets: the case of Uganda

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Abstract

In light of efforts to make higher education (HE) more accessible in African countries, Open and Distance Learning (ODL) has emerged as one of the most promising solutions. A key area of application is duo-mode HE delivery which is designed to overcome the deficiencies of traditional single-mode, campus-based delivery. Successful application has however been generally limited by, among others, inadequate foundational infrastructure, weak demonstration of equivalency with traditional qualifications and low supporting research. Trends in Foreign Direct Investment inflows and growing participation in the global economy by African countries further necessitate ODL that offers the international qualifications increasingly sought by employers.

The current study is based on the following research question: *How can ODL be more effectively integrated into HE programs of duo-mode delivery to improve employability and entrepreneurship in African new frontier markets*? It relies on an inductive, qualitative case study that feeds on evidence from focus group discussions and semi-structured interviews with relevant senior staff at the case HE institution in Uganda. The findings indicate a need for a stronger linkage between duo-mode delivery and direct employability and entrepreneurship using dynamic capabilities. Prominent among such capabilities are adaptive resilience, choice of foundational courses, engagement with international partnerships and anticipation of future changes. We extend organisational capabilities theory, especially from a dynamic capabilities perspective.

Introduction

Africa is the continent with the youngest population (UNDP, 2017). While this status offers some advantages, for example avoiding the demographic challenges faced by ageing western societies, there are other challenges to grapple with. An example is the strain on traditional higher education (HE) institutions to accommodate the increasing demand for higher education (e.g. Kanwar, et al., 2018; Trines, 2018). The need has exposed more fine grained challenges that these institutions face in trying to shift from old, colonial models targeting only a small elite. These challenges include poor foundational infrastructure (e.g. Daniel, 2012), weak demonstration of equivalency with traditional qualifications (Delaney and Brown, 2018) and low supporting research (Mays et al., 2018; Nage-Sibande and Morolong, 2018). Others are weak and even non-existent qualification accreditation and verification systems. The most crippling of all these is arguably the relatively weak linkage between higher education and the socio-economic needs of African countries. Apart from the fact that only a small percentage of the youth make it to University, the success rate in connecting fresh graduates to stable and fulfilling jobs is low (Yeld, 2016).

The Open and Distance Learning (ODL) market in Africa

In light of the problem painted above, ODL has emerged in recent years as one of the strategic options available to African countries. While there have thus far been major technological barriers against ODL, the significant penetration of the mobile phone in the region in the past decade is starting to change dynamics. Consequently, most of Africa and South Asia are now the markets with the highest growth prospects globally (Trines, 2018). In Africa's case, this growth prospect is substantially enhanced by projections about the continent's population as mentioned in the introduction. Not least, the region has witnessed the highest growth rate in internet access (from 5% in 2005 to 24% in 2018) and is projected to see even higher growth rates (UN News, 2018). All these indices signal an emerging demand for basic services like online education, which cannot be met by traditional models. Trends in FDI inflows and increasing participation in the global economy by African countries further necessitate ODL that helps to meet international expectations.

The study is therefore based on the following research question: *How can ODL be more effectively integrated into HE programs of duo-mode delivery to improve employability and entrepreneurship in African new frontier markets?* It relies on an inductive, case-based qualitative research approach into ODL at a leading HE institution in Uganda. Organisational capabilities theory, specifically the dynamic capabilities view in strategic management, is used to theorise about the findings.

Theoretical context

The case for the advantages of ODL has been made, especially in the last two decades (e.g. Rumble, 2000; Musingafi et al., 2016). With pressures on the HE sector growing globally, these advantages have yet to be exploited fully however. Some researchers have differentiated the challenges facing ODL using individual, institutional and instructional categories (Bhalaweesa1999; Mushi, 2001; Myanyi and Mbwetie, 2009). Cross (1981) had previously suggested a differentiation based on situational, institutional and dispositional categories. Berge et al. (2002) went further and advanced a categorisation that included situational, epistemological, philosophical, psychological, pedagogical, technical, social and/or culture-related challenges. Mossberger et al. (2003) on their part focused on the technical challenges in developing countries.

All these challenges have been observed to have implications for the drop-out rate, especially in such developing countries (e.g. Carr, 2000; Fozdar et al., 2006). Some of these studies were informed by foundational work done by Bean and Metzner (1985) using a Student Attrition Theory. One important critique of this and other theories is that they are not strongly derived from student own views (e.g. Mdakane et al., 2016).

The limitations in access to the internet in many developing countries have led some researchers to study the implications on ICT for Learner Support (e.g. Das and Biswas, 2018). But with the continent experiencing the highest growth rate in internet access, albeit from a low starting position, this barrier is expected to weaken with time (UN News, 2018). A major issue is that policy frameworks in many developing countries have been formally

adopted long after ODL was introduced (e.g. Maritim, 2009). This means founding initiatives have had to face tremendous institutional challenges and have lacked clear legitimacy. A widely held view is that ODL in developing countries is well acclaimed, but only lowly exploited (e.g. Muyinda et al., 2019).

Beyond technology, some researchers have investigated the more traditional vehicles of ODL, for example public libraries (Nabushawo et al., 2016). Insights here indicate a need for more holistic approaches to strengthening ODL strategies, including the integration of infrastructural options (Aguti, 2014).

A relatively recent stream of literatures investigates dynamic capabilities as the foundation for the sustainable success of organisations (e.g. Teece, 2007; Helfat and Peteraf, 2015). These capabilities are defined as 'the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments' (Teece, Pisano and Schuen, 1997, p. 516)

But while such capabilities have already attracted considerable attention in understanding firms, there is a gap in applying them to public organisations like universities. In light of the institutional and resource-based pressures that such institutions face, the application of thinking from dynamic capabilities (and strategic management generally) might make a useful contribution to studies in ODL. It is this theoretic gap that this study attempts to fill.

Methodology

The paper is based on a case study of a leading African University that opted for duo-mode delivery. There has been extensive debates about the use of cases in research in the social sciences. Three predominant views have emerged prominently represented by the work of Yin, 2002 (generally positivist) on one end and the work of Stake, 2006 (generally constructivist). In between, there is a relativist approach represented by the work of Eisenhardt (1989). Insights from these views are drawn on in the study.

Considering that duo-mode delivery is still undergoing basic development in many African countries, there is need for in-depth understanding of individual cases. This is especially important considering that there are not yet many studies using a dynamic capabilities approach to investigating duo-mode delivery. Noting further that ODL has not been as readily embraced as predicted, individual cases offer opportunity to go deeper in developing explanations. The high ranking of the case university (Times Higher Education, 2019) and therefore its general reference as a benchmark in Sub Saharan Africa further strengthens the need to understand its experience.

As methods of data collection, we chose focus group discussions, semi-structured interviews (informal discussions) and archives. Staff and administrators of the Institute of Open, Distance and eLearning as well as some members from the hosting College of Education and External Studies were the participants. The focus group discussions were preceded by a workshop where broader issues around ODL were presented and discussed. This preceding workshop was attended by 20 staff. Two focus groups were thereafter constructed, with one addressing employability and the other entrepreneurship. Each focus group had six participants, including the facilitator. In addition, there was informal interaction with five members of the team, providing opportunity to gather more insights. There were interactions with five other members from the institution of the visiting researcher who were involved with ODL in African countries.

In conclusion, there was variety in sources of data. Thematic analysis was used to analyse the transcripts and the documents used. Starting from the raw data, there was an iterative process that led to an initial extraction of first order themes. After several iterations to extract as many themes as possible, there was a further synthesis of these first order themes to identify higher order themes that were integrative. Only themes that were judged to directly constitute or support a dynamic capability in the sense of the study were sustained.

The findings from this process are presented in the next section of the paper, which also includes a discussion.

Findings and discussion

The findings are presented as the dynamic capabilities that emerged most prominently out of the analysis of the qualitative data. Further analysis of these capabilities and the timeline and the institutional circumstances under

which they developed informed the construction of a processual framework (Figure 1). Building on Teece's (2007) seminal propositions about organisations' dynamic capabilities for sensing and seizing opportunities and for reconfiguring resources and capabilities in order to succeed, we develop the framework to represent the evolution and clustering of the capabilities identified. In the context of an HE institution, we interpret sensing to mean having the collective capability of a team in a department and/or faculty to recognise learners' needs that necessitate a new or a revised course offer. Seizing consequently means taking strategic (and operational) steps to actualise what has been sensed. But at a more basic level, it also means the sensing and the seizing that is done to introduce ODL, in the first place. Configuring and reconfiguring refers to the bundling of resources to enable the development of capabilities that lead to organisational success. We further use 'adaptive resilience' to describe the capability to respond to fast-changing and sometimes uncertain environments.

Table 1: Capabilities for supporting employability using ODL

| First order capabilities for supporting employability	Second order capabilities for supporting employability
Determining core portfolio of ODL courses	Sen, Sei, C, R, A
Winning Buy-In inside the institution	Sen, Sei, EI
Deciding when and how to design programs	C, R, A
Identifying opportunities with corporates	Sen, Sei, C, R, A
Institutionalisation of good practice	R, A, EI
Developing resilience	AR, R, EI, A, EI
Adapting to technology advancement	R, A, EI
Enhancing ODL courses with soft skills development	Sen, Sei, AR, R

Legends:
A (Anticipation), AR (adaptive resilience), C (Configuration), EI (Engaging institutions), R (Reconfiguration), Sen (sensing), Sei (seizing)

Table 2: Capabilities for supporting entrepreneurship using ODL

First order capabilities for supporting entrepreneurship	Second order capabilities for supporting entrepreneurship
Recognising potential in learners' projects	Sen, Sei, C, A
Setting up core support tools like a 'lab'	C, R, A
Reconfiguration of projects to make them more dynamic	R, A
Responsiveness to resource, capability and institutional gaps	AR, EI, R
Innovative approaches to skills development	Sen, Sei, C, R, A
Partnerships for learning	Sen, Sei, AR, C, R,
Benchmarking	C, R, A
Enhancing ODL courses with soft skills development	C, R, AR
Developing resilience	Sen, Sei, AR, C, R

Legends:
A (Anticipation), AR (adaptive resilience), C (Configuration), EI (Engaging institutions), R (Reconfiguration), Sen (sensing), Sei (seizing)
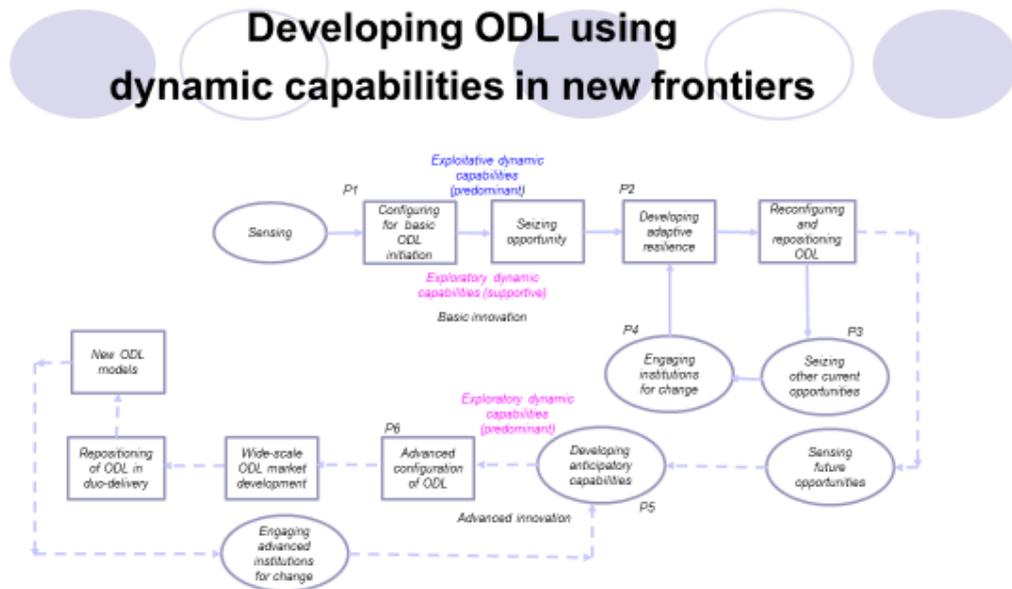
Figure 1: Developing ODL using dynamic capabilities in the HE sector in new frontier markets

Further analysis led us to associate the different capabilities with the clusters in the framework. In other words, we determined whether a capability manifests itself prominently during sensing, configuring, seizing, developing adaptive resilience, reconfiguring & repositioning, engaging institutions, developing anticipatory capabilities, etc. Some capabilities had multiple manifestations, indicating their robustness within ODL strategies. The associated clusters are abbreviated in the right hand columns of the tables and revealed in the legends below the tables. The capabilities that are highlighted in bold in the tables represent those that influenced most clusters and which are relatively most impactful based on the data. This was interpreted to reflect their strategic importance in developing and sustaining ODL at the institution. These key capabilities are discussed below.

Dynamic capabilities to strengthen ODL's support for employability

   A) *Determining the core portfolio of ODL courses*

The choice of courses to use as the foundation for initiating ODL appears to critically matter. This is particularly the case in contexts where ODL has yet to unleash its potential (e.g. Muyinda et al., 2019). Choices are however often hindered by institutional challenges. As an example, ODL in our case study operated without a policy framework for many years. It was only in 2015 that the policy was passed. To be able to strategically select the founding courses necessitated not only a good circumvention of the institutional situation, but also a good anticipation of the future. These foundational courses set precedence in many ways. While the portfolio would be expected to develop eventually, the initial portfolio must be adequately dynamic to nurture further growth. We extend Teece's (2007) seminal work and suggest that there is a crucially important stage of 'configuring' that comes after 'sensing' an opportunity and before seizing the opportunity (see Figure 1). We have called this 'configuring for basic ODL initiation'. The dynamic capabilities here are predominantly exploitative (Birkinshaw et al., 2016) and depend on the ability of the founding team to merge their experiences and to complement each other well.

These observations lead us to make **proposition 1**:

- *In new frontier countries adopting a duo-mode delivery in higher education, the initiation of ODL requires a basic configuration that can withstand institutional and resource challenges*

B) Identifying opportunities to work with corporates

The possibility of corporate partnerships that can translate into internships and apprenticeships for the learners is critical for success. In a relatively small country like Uganda, however, opportunities for corporate partnerships are relatively limited. Yet the economy and FDI are growing (World Investment Report, 2019). Further, Uganda is starting to act as a springboard for entry into the more challenging neighbouring markets (Mbalyohere et al., 2017). There is therefore a need to not only see current opportunities, but also to anticipate the future. Anticipatory capabilities are designed to predict policy change and to gain first-mover advantages (Holzinger and Oliver, 2008). Such anticipation would further help ODL in Uganda to address the projected rise in demand for higher education in the region (Trines, 2018).

*These observations have informed **propositions 3, 5 and 6** which are presented later under the entrepreneurship section. This also indicates further the importance of linking employability and entrepreneurship to support strategies in ODL.*

C) developing resilience

The capability for resilience – developing adaptive resilience (see Figure 1), in the face of multiple environmental challenges is the most important capability we identified. Again, this extends seminal work (Teece, 2007) by suggesting that this adaptive phase needs to happen prior to the reconfiguring and repositioning of ODL. The adaptiveness reflects the need for responding to often very challenging environmental conditions. The extended lack of a policy framework required well suited responses, if the program was not to die prematurely. The team that developed and sustained the program in the early stages appears to have similarly initiated a resilience that grew and enabled survival. This foundational adaptive resilience is expected to play a critical role in the next years as demand from both within the country and across the borders grows.

These further observations lead us to making **proposition 2**:

- *In new frontier countries adopting a duo-mode delivery in higher education, deploying capabilities of adaptive resilience is critical to developing ODL in spite of institutional and resource challenges*

Dynamic capabilities to strengthen ODL's support for entrepreneurship in new frontiers

A) innovative approaches to skills development

Innovative approaches to dealing with the skills needs of the learners stood out in the findings on entrepreneurship. The course was however relatively young and so there were still some streamlining needed. The idea of a 'lab' to help learners develop skills they would need on the market was a compelling example of the innovative possibilities available to ODL. In this case, many targeted learners could not readily afford travelling to and residing in Kampala to attend the physical lab. So there was need to either set up a 'mobile lab' or a virtual lab or a combination of the two to meet their need. Flexibility and adaptability have already been identified as critical attributes of the dynamic capabilities of firms in diverse contexts (e.g. Birkinshaw et al., 2016; Teece, 2016). There is however still a gap to understand how they operate at the interface between the public and private sector.

A fundamentally important view of the unit team is that the skills that are developed in the lab should actually be accessed by all university students, irrespective of their main course. Considering that significant numbers of people in new frontiers end up starting a side enterprise in order to consolidate their job earnings, this is an important view. It would however have to receive significantly higher resource support in order to meet the objective of universal access to entrepreneurial skills development. The skills highlighted here are also relevant for strategies in HE to develop the corporate partnerships which were explained above under employability. In fact, the internships offered by corporates can also help develop entrepreneurial skills.

The insights from the later application of ODL to entrepreneurship lead us to **proposition 3**:

- *In new frontier countries adopting a duo-mode delivery in higher education, the capability to seize other current opportunities, in spite of institutional and resource challenges, is critical to developing ODL*

B) partnerships for learning

Identifying and forming partnerships with other organisations to enhance the quality, diversity and comprehensiveness of learning emerges as the other key dynamic capability under entrepreneurship. One of the most important areas of partnership identified by the research participants was regarding the international dimensions of ODL. Consequently, there was need to enable partnerships with other universities and organisations that had more expertise internationally. Such partnerships would best work if there was mutual benefit built on complementary objectives. An example of such complementarity is that some potential international partners are increasingly seeking to strengthen their internationalisation strategies, not least in new frontiers. By implication, it is important to include a study on the complementarity of the dynamic capabilities that each partner possesses. The location advantages that organisations have in a country like Uganda (e.g. Mbalyohere et al., 2017) would be relevant in such studies. In our framework (see Figure 1), there are possibilities to develop capability complementarity at all the key points.

These observations lead us to **proposition 4**:

- *In new frontier countries adopting a duo-mode delivery in higher education, the capability to engage policy and regulatory institutions to permit local and international partnerships is critical to developing ODL*

C) developing resilience

Finally, the entrepreneurship offer in ODL also needs to get grounded in capabilities of resilience, just like we have seen with employability above. Such resilience in fact emerges as the most prominent capability that was common to both sets of findings, having relevance for the now and for the future. The resilience here further appears to be two fold – inside and outside the institution. Inside the institution, there was still need to make the case for the strategic importance of strengthening ODL. One of the most important areas where this resilience would be put to the test was in sustaining and further developing projects like the 'lab', in spite of resource limitations. The capability to make the best out of limited resources and to leverage impact as much as possible was indeed generally a hallmark of the whole ODL initiative from its inception. The team managing entrepreneurship had an opportunity to develop this further. In light of a very dynamic external entrepreneurship environment, with Uganda registering one of the highest enterprise formation rates globally (Patton, 2016), there were implications for the nature and quality of ODL that was needed. It could, for instance, contribute to addressing the high rate of collapse of the started enterprises. In other words, the capabilities for resilience needed to be leveraged to support more enterprises to not only survive, but also thrive and create more jobs. This was critical to growing the economy and meeting an anticipated stronger demand from the wider region in the mid- to long-term.

Our observations here and earlier under employability suggest that robust resilience also nurtures the capability to anticipate the future. The implications of this are also relevant for better approaches to developing corporate partnerships.

This important anticipatory capability leads us to finally make propositions **5 and 6** respectively as follows:

- *In new frontier countries adopting a duo-mode delivery in higher education, deploying anticipatory capabilities oriented to the future without undermining current work is critical to developing ODL*
- *In new frontier countries adopting a duo-mode delivery in higher education, anticipatory capabilities that can lead to new ODL models and partnerships are critical to sustained success*

Conclusions

In conclusion, the study contributes to our understanding of ODL in new frontier contexts. While the focus has been on evidence from a single country and a single institution, the richness of experiences and the ranking of this particular institution within Africa suggest a broader relevance. Our most important findings are reflected in the six propositions. In short, these translate into the importance of initiating ODL using a basic configuration that can withstand institutional and resource challenges; deploying capabilities of adaptive resilience against institutional and resource challenges; seizing other current opportunities, in spite of institutional and resource challenges; engaging policy and regulatory institutions to enable partnerships; deploying anticipatory capabilities oriented to the future without undermining current work; and deploying these anticipatory capabilities to create new ODL models and start developing partnerships for the future.

It is also evident that there are important linkages between ODL for employability and for entrepreneurship. These linkages need to be strengthened further as part of making the best use of meagre resources and enhancing the wider strategic configuration of ODL. In light of the projected growth in demand for higher education in new frontier markets, the findings can inform solutions. The use of a dynamic capabilities approach offers an opportunity to extend seminal propositions into new contexts. ODL opens the door to take the research further and to understand what capabilities are needed to support learners to transit more successfully into employability and entrepreneurship.

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